BREAKING NEW GROUND IN THE PHILIPPINES:
Opportunities to Improve Human and Environmental Well-being

In the face of mounting development challenges, people and communities across the Philippines are breaking new ground in designing innovative programs that address human and environmental well-being in holistic ways. By tackling multiple issues simultaneously, these projects are enabling communities to reap immediate benefits while laying the groundwork for sustained health and livelihoods.

But further government support and cross-sectoral cooperation is needed to sustain and expand these efforts. This policy brief explores the interconnections among urgent issues related to population, health, and environment in the Philippines; highlights programs that address these issues in an integrated fashion; and outlines next steps that can advance the country's comprehensive development efforts.

Growing Unsustainability

The treasures of the Philippines are world-renowned: The beauty and productivity of the country's landscapes, its unique plants and animals, and the vitality of its people are among its defining traits.

But these treasures are threatened. The health and well-being of Filipinos are being increasingly compromised as the country's cities become more crowded and polluted and as the reliability of food and water supplies in rural areas of the Philippines becomes more uncertain. The productivity of the country's agricultural lands and fisheries is declining as these areas become increasingly degraded and pushed beyond their capacity to produce. Plant and animal species are also disappearing due to the loss of the country's forests and the destruction of its coral reefs.

These interconnected problems of population, health, and environment are among the Philippines' greatest challenges in achieving its national development goals—including the Millennium Development Goals, which aim to eradicate poverty, improve health, and ensure environmental sustainability.

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Catching enough fish to earn a living has become increasingly difficult for many Filipinos as coastal areas become more polluted and overfished.

Population, Health, and Environment in the Philippines

As the largest generation of Filipinos in history comes of age in the next several years, renewed efforts will be necessary to meet citizens' needs and to achieve development goals (see Box 1, page 2). Population trends, natural resource use, and the health and well-being of Filipinos are linked together in a complex web of social, economic, and physical interactions. Changes in one part of this web reverberate in other areas, as illustrated below.

Forest Loss Leads to Declining Productivity of Agriculture and Fisheries

Rapid forest loss has eliminated habitat for unique and threatened plant and animal species; it has also left large tracts of land in the Philippines vulnerable to soil erosion (see Box 2, page 3). The loss of nutrient rich soil reduces crop yields and contributes to the expanded use of chemical fertilizers—a practice that can, in turn, pollute water sources. Rivers and streams also carry eroded soil to the coasts, where it interferes with fish nursery areas.

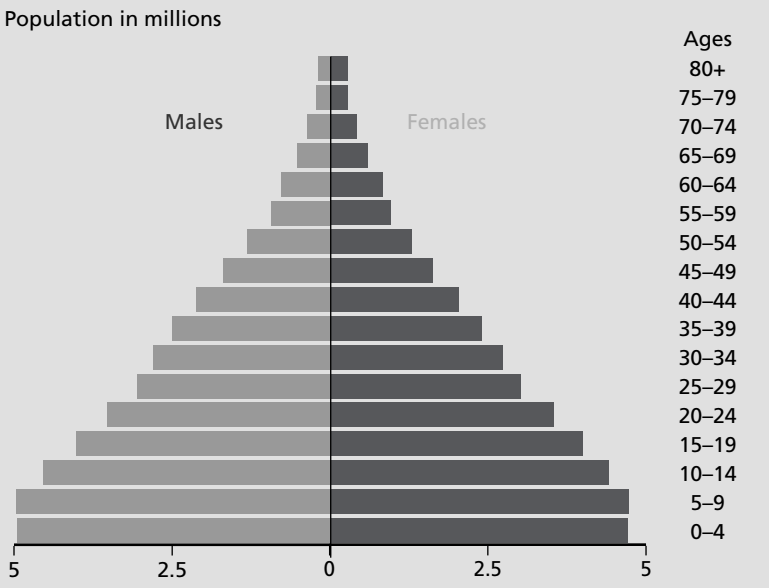
Box 1

The Impact of Filipino Youth

With one of the highest population growth rates in Southeast Asia (currently at 2 percent per year), the Philippines is projected to grow from its current population of 83.7 million to 147.3 million in 2050.[1] This growth can be attributed to the country's relatively high total fertility rate and to population momentum. This momentum is generated by the large proportion of young people in the Philippines: 37 percent of the population is under 15 years of age (see figure).[2] As this large group of young people enter their reproductive years, they will produce more children than did their parents' generation. Ultimately, the size of the population in 2050 in the Philippines will depend on how many children today's youth have. Their access to reproductive health services and information is key to helping today's youth achieve their desired family size.

Evidence suggests that Filipinos want and need reproductive health and family planning services. Currently, slightly less than one-half of married women in the Philippines use contraception, and one-third of those women rely on traditional methods.[3] At the same time, many Filipino women are having more children than they want: While surveys indicate that the average desired total fertility rate in the country is 2.7 children per woman,[4] the actual total fertility rate in the Philippines is currently 3.5 children per woman.[5] In addition, maternal mortality in the Philippines is still common: Approximately 10 women die every 24 hours from pregnancy-related causes.[6] The need to address these issues also extends to young Filipinos. According to national surveys, 33 percent of young women between ages 20 and 24 had already given birth to their first child before reaching their 21st birthday. Pregnancies to young women also account for three of every four maternal deaths in the country.[7]

Age and Sex Profile for the Philippines, 2000



SOURCE: National Statistics Office: www.nscb.gov.ph/secstat/d_popn.asp.

References

1. Population Reference Bureau, *2004 World Population Data Sheet* (Washington, DC: Population Reference Bureau, 2004).
2. National Statistics Office, 2000. Data accessed online at www.nscb.gov.ph/secstat/d_popn.asp, on Aug. 15, 2004.
3. Population Reference Bureau, *2004 World Population Data Sheet.*
4. United Nations Population Fund, *2000-2004 Fifth County Programme Mid-Term Review Country Brief* (Manila: Government of the Philippines and United Nations Population Fund, 2002).
5. Population Reference Bureau, *2004 World Population Data Sheet.*
6. Commission on Population, *State of the Philippine Population Report 2000* (Mandaluyong City, Philippines: POPCOM, 2001).
7. Commission on Population, *Philippines Country Report for the 5th Asia and Pacific Conference on Population and Development* (Mandaluyong City, Philippines: POPCOM, 2002).

Soil runoff into fish breeding and nursery areas is one of several factors leading to the overall decline in productivity of fisheries in the Philippines. Population growth and migration to coastal areas have contributed to more fishing as new coastal residents seek to support themselves and their families. Increased fishing has also contributed to the depletion of fisheries, accelerating the decline in fisheries-based food availability.[1] The total fish available per person per year fell 19 percent between 1990 and 1996, a reflection of historic decreased municipal fish catches.[2] Clearing mangroves for fuelwood, charcoal production, and coastline development further degrades areas important to the fishing industry and leaves the coastline more vulnerable to storm surges, tidal currents, and typhoons.[3] It is estimated that approximately two-thirds of the country's original mangroves have been lost.[4]

Declining Productivity of Agriculture and Fisheries Exacerbates Poverty

With 9.7 million Filipinos employed in agriculture, hunting, and forestry activities and another 1.3 million employed in fishing,[5] the loss of productivity of agricultural lands and fisheries has negatively affected the livelihoods and well-being of the country's residents. The negative impact is all the more acute in the context of declining proportional government spending on social services.[6] In 2000, 4.3 million households—more than one-third of the population—lived below the national poverty threshold (4,835 pesos per month for a family of five).[7] Income levels are especially low in the fishing sector: Four out of five of the nation's fisherfolk live in poverty.[8]

Food Insecurity Contributes to Further Environmental Degradation

Declining agricultural productivity and fishing yields raise concerns about food insecurity for many Filipino families. The lack of a stable and reliable food supply contributes to poor nutritional status for many Filipinos, especially for children: Approximately 28 percent of children under 5 years of age in the country are underweight.[9] Food insecurity also contributes to increases in environmentally destructive practices such as slash-and-burn agriculture or the use of dynamite to increase short-term fish catches. And concerns about livelihoods and food security can prompt families to relocate to cities in search of income and social services, or to send a family member abroad to earn an income that can be sent back to the Philippines to support relatives.[10]

Crowded Conditions and Changing Landscapes Affect Human Health and Safety

The proportion of the Filipino population that is living in urban areas of the country is growing. In 1970, 32 percent of the country's population lived in urban areas. Today, 48 percent is crowded into cities, where housing and infrastructure struggle to keep pace with the growing numbers.[11] The trend in urban growth can be attributed to numerous factors, including nationwide high fertility, the lack of social services in rural areas, and rural unemployment and low wages, which often encourage young people to migrate to cities. Overcrowding and insufficient housing can be particularly detrimental to children: Studies have suggested that infant mortality rates in Manila's slums are three times higher than in nonslum areas.[12]

This rising urbanization has also led to water quality problems in urban and coastal areas of

Box 2

The Threat to Natural Resources in the Philippines

Comprising more than 7,000 islands, the Philippines has an extensive coastline that is a key environmental and economic resource for the nation. Coral reefs near the country's coasts contain 500 of the world's 700 known coral species.[1] These coasts support a growing tourism industry and fisheries that provide about half of the dietary protein needs of the Philippine population. Up to 80 percent of animal protein consumption in the country's rural coastal communities is derived from fish caught in municipal waters.[2] Mangroves, the salt-tolerant forests that play an important role in stabilizing the coastlines of the Philippines, also provide important nursery grounds for numerous fish species. However, the quantity and quality of harvestable resources from the country's coastal waters have declined dramatically due to overfishing and habitat degradation resulting from pollution, sedimentation, and the destruction of mangroves.[3]

Because the Philippines' remarkable diversity of terrestrial and marine animals and plants is increasingly threatened, the entire country has been named one of the world's 25 "biodiversity hotspots." About 76 percent of plant species in the Philippines are endemic (i.e., they are found nowhere else in the world), as are more than half of the country's mammal species.[4] At the same time, only about 7 percent of the nation's original lowland forest—important habitat for many endangered species—remains. And the lowland forest that is left is rapidly disappearing: Between 1990 and 2000, the country lost more than 800,000 hectares of forests to clearing for agriculture, forest fires, illegal logging, and other factors.[5] More than 400 plant and animal species found in the Philippines are currently threatened with extinction, including the Philippine eagle, the tamaraw, and the dugong.[6]

References

1. Conservation International, "Biodiversity Hotspots: Philippines," accessed online at www.biodiversityhotspots.org/xp/Hotspots/philippines/, on July 23, 2004.
2. Catherine A. Courtney et al., *Coastal Resource Management for Food Security* (Cebu City: Coastal Resource Management Project Philippines, 1998): 4.
3. Cesar Z. Luna et al., "Sustaining Philippine Marine Fisheries: Key Management Issues and Opportunities," *Overseas: The Online Magazine for Sustainable Seas* 7, no. 2 (February 2004).
4. Conservation International, "Biodiversity Hotspots: Philippines."
5. Food and Agriculture Organization of the United Nations (FAO), *Forest Resources Assessment 2000*, accessed online at www.fao.org/forestry/site/1321/en, on Sept. 1, 2004.
6. World Conservation Union, *IUCN 2003 Red List of Threatened Species*, accessed online at www.redlist.org, on Aug. 15, 2004.

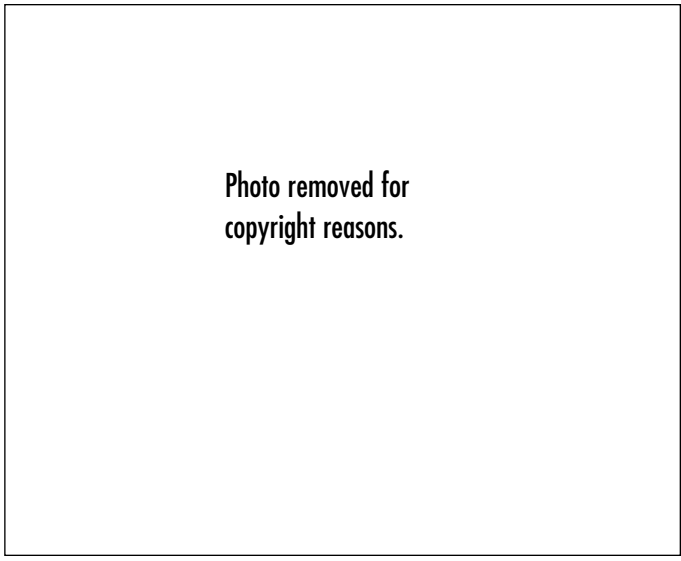
the Philippines, as urban infrastructure such as water delivery and sewer systems fails to keep pace in increasingly crowded conditions. Access to clean and adequate water is an acute seasonal problem in these areas, particularly in Metro Manila, Central Luzon, Southern Tagalog, and Central Visayas. According to government monitoring data, up to 58 percent of the country's ground water is contaminated with coliform bacteria, which indicates the presence of contaminants and pathogens that can cause diarrhea, cholera, dysentery, hepatitis A, and other diseases. Approximately 31 percent of the nation's illnesses monitored for a five-year period were caused by water-borne sources.[13]

Increasing numbers of people and vehicles have made air quality a concern in urban areas of the Philippines. Levels of particulate matter have decreased in recent years because of improved automotive technology and because some power plants and industries have switched from fossil fuels to natural gas. Despite these improvements, however, levels of particulate matter are still above acceptable health standards in many areas of the country.[14] Currently, diesel emissions resulting from increased vehicular use are considered the largest contributor to urban air pollution in the country.[15] Airborne fine particulate matter in urban areas also contributes to higher rates of pulmonary illnesses, especially among children and the elderly.

Changing landscapes—such as the clearing of forests for human settlement, agriculture, and timber—have also contributed to the severity of flash floods and landslides in the Philippines. Such natural disasters have claimed the lives of thousands of Filipinos and are particularly problematic in areas of high population density. A case in point is the well-known 1991 flash flood in Ormoc City in Leyte Province, in which at least 3,000 people died.

Breaking New Ground: Snapshots of Success

The connections among population, health, and environment illustrated above have inspired groups of people in different parts of the Philippines to work cooperatively to craft innovative, multifaceted programs that can help to secure livelihoods, protect the environment, and improve health throughout the country. Several of these projects are briefly described below.



Community participation in planning efforts is a key component of many integrated population, health, and environmental programs.

Securing Livelihoods

Recognizing the links between growing populations and declining fish stocks in coastal communities, Save the Children, a humanitarian relief and development organization, launched the **People and Environment Coexistence Development Project** (PESCODEV). Combining reproductive health service delivery and environmental management, Save the Children works with local government officials and fishing families in the provinces of Iloilo and Guimaras to provide assistance and training in coastal resource management and fish catch monitoring. Activities include the designation and monitoring of marine protected areas, mangrove reforestation efforts, and improved reproductive health service delivery—efforts that are helping communities achieve their long-term goals of poverty reduction and economic well-being.

Protecting the Environment

World Neighbors, a grassroots development organization, works with the Bohol Alliance of NGOs in the Visayas region to ensure community well-being, family health, and watershed protection. This program combines its research and activities in various locations with broader watershed protection efforts. The program promotes the use of farming technologies that increase water supply and quality, protect biodiversity, and provide

environmentally sound livelihood opportunities. As part of the program, communities provide health services together with natural resource management efforts.

Improving Health Outcomes

The **Integrated Population and Coastal Resource Management** (IPOPCORM) initiative is an ongoing program managed by a local, private NGO, PATH Foundation Philippines, Inc. The program covers 105 of the country's coastal barangays in 18 municipalities, spanning nine priority marine conservation areas. IPOPCORM's program works to simultaneously build local capacity for coastal resource management and improve reproductive health outcomes in these areas through expanding family planning services and focusing on the prevention of AIDS and other sexually transmitted diseases. The program incorporates efforts to ensure the sustainability of activities through the engagement of local counterparts and investments. Working with the private sector, the IPOPCORM program has achieved a ten-fold increase in access to family planning services in the area in which it works, establishing over 800 service points in the program's coastal communities.[16]

Creating Decisionmaking Tools

Through its **Mapping Population-Biodiversity Connections in the Philippines** project, the international NGO Conservation International is working with the Philippines' Protected Areas and Wildlife Bureau-Department of Environment and Natural Resources (DENR) as well as with the National Economic and Development Authority (NEDA) on a comprehensive population-environment mapping project. The project created digitized maps using geographic information systems (GIS) technology and statistical analysis to identify key demographic and socioeconomic variables. These maps cover 79 provinces and 137 priority conservation areas identified by a government-NGO collaborative effort called the Philippine Biodiversity Conservation Priorities Program. These maps provide enriched information for policymakers that can be used to design more effective strategies to address the interconnected issues facing people and the environment in these high-priority conservation areas.

Working With Key Local and National Stakeholders

In addition to these community programs, a group of researchers, planners, and experts in the Philippines called **PHE Sigue** is sharing information, implementing new programs, and advising decisionmakers on ways to maximize development efforts. Formed in 2002, PHE Sigue is a coalition of NGOs, people's organizations, universities, government agencies, and local and national policymakers.[17] Coalition members refine best practices, provide training, and make recommendations to increase integrated population, health, and environment benefits for Filipinos. The group convened the First Philippine Conference on Population, Health, and Environment in Manila in November 2004.

Opportunities: Improving Health, the Environment, and Livelihoods

The programs described in this policy brief address immediate problems and employ cutting-edge strategies to improve human health, the environment, and livelihoods for the coming generation of Filipinos. Holistic programs such as these address multiple needs simultaneously and offer an opportunity to promote both human and environmental well-being. Decisionmakers and program managers can take several steps—which are outlined below—that will facilitate the development of more integrated projects in the Philippines as well as strengthen those that already exist.

Support National Policies That Will Help Integrated Projects Succeed

National policies that clearly articulate a vision for the Philippines in areas such as land use, population and development planning, and reproductive health can contribute to a broad national policy framework within which integrated population, health, and environment programs could benefit the general populace. In addition, intergovernmental agreements such as "debt-for-nature swaps," which can shift the burden of external debt to program support for environmental conservation, show promise for expansion into integrated population, health, and environment programs that are rooted in communities and contribute to environmental protection and improved livelihoods.

Encourage the Integration of Population Considerations in Environmental Planning
The consideration of a range of population variables—such as population growth, migration, fertility, and age structure—can help managers develop informed strategies for specific environmental projects. Such information also can help population, health, and environment projects to operate more effectively.

The Philippines' Commission on Population, along with the DENR and the University of the Philippines-Los Banos, took an important first step toward incorporating population issues into environmental efforts: They proposed integrating population variables into the Environmental Impact Assessment System, an existing planning tool that is used to evaluate the environmental impact of proposed governmental projects. Mapping projects that overlay socioeconomic data with environmental data—such as the joint efforts of Conservation International, DENR, and NEDA—have resulted in new tools and information that facilitate effective cross-sectoral activities.

The consideration of population variables can help managers develop informed strategies for specific environmental projects.

Participation in such efforts from a wider group of government agencies and organizations could allow for greater expansion of integrated programming into new geographic areas—including urban centers, where issues such as provision of basic social services, pollution, garbage collection, and youth employment could be addressed in a more integrated manner.

Establish and Maintain Institutional Support Mechanisms at the Local and Regional Levels
The linked nature of population, health, and environment issues can and should be recognized by national government institutions in the Philippines. At the same time, individual communities are faced with unique sets of challenges and need site-specific initiatives tailored to their needs. Clear national policies and objectives can help to guide, support, and expand local and regional integrated programs.

The Commission on Population, for example, has provided an approach for population and development integration wherein national-level research and planning include consideration of population variables in development policies, with corresponding program interventions at the local level.[18] This approach provided the impetus and guidelines for several municipalities in Iloilo that have recently passed resolutions to initiate efforts in integrated population, health, and environment programs.[19]

Foster Cooperative, Cross-Sectoral Relationships Between NGOs, People's Organizations, and Government Agencies
Policies and programs that encourage collaboration across the population, health, and environment sectors allow for coordinated action on issues that confront communities across the Philippines. These programs can yield quick wins (such as reductions in illegal fishing) as well as build steadily toward longer-term goals (such as empowering families to achieve their desired family size and engage in stable livelihood activities). The involvement of a wide range of participants from government agencies, local and national legislatures, NGOs, and people's organizations can promote information sharing, activity coordination, and the formation of partnerships that can facilitate effective integrated programming. Coalitions such as PHE Sigue offer a forum for the establishment of such cross-sectoral relationships.

Conclusion

Population, health, and the environment in the Philippines are intricately interconnected and complex. Collaborative efforts that address the complexity of these interconnections can improve Filipinos' health, economy, and future. The challenge lies in ensuring that all Filipinos will be able to count on health and well-being for their families, their communities, and the natural resources upon which they depend.

References

[1] Catherine A. Courtney et al., *Coastal Resource Management for Food Security* (Cebu City: Coastal Resource Management Project Philippines, 1998): 4.
[2] World Bank, *Philippines Environment Monitor 2000* (Manila: World Bank Group, 2000): 30.
[3] Dioscoro M. Melana et al., *Mangrove Management Handbook* (Manila: Coastal Resource Management Project of the Department of Natural Resources, 2000).

[4] Cesar Z. Luna et al., "Sustaining Philippine Marine Fisheries: Key Management Issues and Opportunities," *Overseas: The Online Magazine for Sustainable Seas* 7, no. 2 (February 2004).
[5] National Statistical Coordination Board, preliminary labor and employment statistics for April 2004, accessed online at www.nscb.gov.ph/secstat/d_labor.asp, on July 28, 2004.
[6] Philippine Legislators' Committee on Population and Development Foundation, Inc., *A Legislative Agenda in Pursuit of the Millennium Development Goals (MDGs): Policy Proposals for the 13th Congress* (Quezon City: PLCPD, 2004).
[7] National Statistical Coordination Board, "Fact Sheet: 4.3 Million Filipino Families are Living Below the Poverty Line" (FS-200310-SS1-01, posted Oct. 2, 2003), accessed online at www.nscb.gov.ph/factsheet/pdf03/fs3_07.asp, on July 28, 2004.
[8] Luna et al., "Sustaining Philippine Marine Fisheries: Key Management Issues and Opportunities."
[9] UNICEF, *The State of the World's Children 2004* (New York: UNICEF, 2003): 26.
[10] Edgard Rodriguez and Susan Horton, *International Return Migration and Remittances in the Philippines*, Working Paper, Number UT-ECIPA-Horton-95-01 (Toronto: Department of Economics and Institute for Policy Analysis, University of Toronto, n.d.).
[11] Commission on Population, "FACT SHEET: Urban Population in the Philippines," accessed online at www.popcom.gov.ph/featured_documents/urban_population.html, on July 23, 2004; and Philippines Census Bureau, *2000 Census*, data tables accessed online at www.census.gov.ph/data/sectordata/2003/pr0382.htm, on Oct. 4, 2004.
[12] Sarah Fry, Bill Cousins, and Ken Olivola, *Health of Children Living in Urban Slums in Asia and the Near East: Review of Existing Literature and Data* (Washington, DC: Environmental Health Project, May 2002).
[13] World Bank, *Philippines Environment Monitor 2003: Water Quality* (Manila: World Bank Group, 2003): iii.
[14] World Bank, *Philippines Environment Monitor 2002* (Manila: World Bank Group, 2002): 1.
[15] World Bank, *Philippines Environment Monitor 2002*: 1.
[16] Joan R. Castro, Leona A. D'Agnes, and Carmina A. Aquino, *Mainstreaming Reproductive Health and Integrated Coastal Management in Local Governance: The Philippines Experience* (Manila: PATH Foundation Philippines Inc., 2004): 10.
[17] The following organizations are members of PHE Sigue: Agricultural Cooperative Development International/Volunteers on Overseas Cooperation Assistance; Bohol Alliance of Non-Governmental Organizations; Bureau of Fisheries and Aquatic Resources, Region 6; Commission on Population, Region 7; Conservation International-Philippines; Department of Health, Region 6; First Consolidated Bank Foundation Inc.; Foundation for the Philippine Environment; Helen Keller International; Municipality of Ajuy, Iloilo; Municipality of Concepcion, Iloilo; National Nutrition Council; PATH Foundation Philippines, Inc.; Philippine NGO Council for Health, Population and Welfare; Philippine Legislators' Committee on Population and Development Foundation, Inc.; Philippine Rural Reconstruction Movement; Save the Children/US-PhFO; and Western Mindanao State University.
[18] Commission on Population, *Directional Plan for the Philippines Population Management Program 2001-2004* (Mandaluyong City, Philippines: POPCOM, 2000).
[19] Alliance of Northern Iloilo for Health Development, Resolution No. 2002-08.

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PRB's Population, Health, and Environment Program

PRB's Population, Health, and Environment Program works to improve people's lives around the world by helping decisionmakers understand and address the consequences of population and environment interactions for human and environmental well-being. For more information on the PHE program, please write to PHE@prb.org.

Founded in 1929, the Population Reference Bureau is the leader in providing timely and objective information on U.S. and international population trends and their implications. For more information on PRB and its programs, please visit PRB's website at www.prb.org.

Population, Health, and Environment in the Philippines
Fact Sheet

Population of the Philippines, 2004	83.7 million
Projected population, 2050	147.3 million
Percentage of population under 15 years of age, 2004	37 percent
Total fertility rate (desired)	2.7 children per woman
Total fertility rate (actual)	3.5 children per woman
Percentage of couples using a method of family planning	49 percent
Number of deaths per day from pregnancy-related causes	10
Percentage of population living in urban areas	48 percent
Percentage of illnesses caused by water-borne sources	31 percent
Percentage of original lowland forest still intact	7 percent
Hectares of forest lost, 1990-2000	88,000 per year
Number of species threatened with extinction	400
Number of people employed in agriculture, hunting, forestry, and fishing	11 million
Number of households living below poverty threshold	4.3 million
Percentage of children who are underweight	28 percent

SOURCES: Philippines' Commission on Population; Food and Agriculture Organization of the United Nations (FAO); Philippines' National Statistical Coordination Board; Population Reference Bureau; UNICEF; World Conservation Union; and the World Bank.

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